

| Year/Paper | Question Number | Marks | Topic |
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| Jun09 Paper 1 | 1A,b | 2,8 | Input and Output Devices |
| | 1c | 6 | Expert Systems |
| | 2a | 4 | Buses |
| | 2b | 4 | Serial/Parallel/half duplex/full Duplex |
| | 2c | 3 | Packet/Circuit Switching |
| | 2d | 8 | Impact of unrestricted access to internet on young |
| | 3 | 9 | MICR, OMR, OCR – meanings and uses |
| | 4a,b | 6,2 | Systems Analysis Feasibility factors; Spiral model |
| | 5a,b,c,d | 2,3,5,2 | Actuators, sensors, thickness control |
| | 6a,b | 6,3 | Binary, bcd, hex; binary to interpret hexadecimal |
| | 7a,b,c | 6, 6, 4 | User interface design factors; backup/archive; backup |
| | 8a,b | 3,8 | Chars of lans and wans; checksums and parity checks |
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| Jun09 Paper 2 | 1a, b | 6,2 | Sequence, Selection and Iteration; Choice and output |
| | 1c | 17 | Dry running, purpose of algorithm and types of errors |
| | 1d | 6 | Dry running and debugging |
| | 1e | 6 | Describe debugging tools that can be used to catch errors |
| | 2a | 6 | Website; Parcel delivery data items/elements and reasons |
| | 2b | 6 | Postcodes and sorting into order |
| | 2c | 8 | Validation and 3 validation checks for a postcode |
| | 2d | 6 | Formatting, string manipulation (postcodes) |
| | 3a,b | 2,3 | Arrays, interpreting the contents of a 2d array |
| | 3c | 3, 2 | Pseudocode for array and its completion; parameters |
| | 3d | 6 | Code in high level lang. of choice for Lift Supervisor call |
| | 4a | 5 | Variables, constants, maintainability using constants |
| | 4b | 8 | Variables/data types/reason for chosen data type |
| | 4c | 8 | Write pseudocode algorithm to pick best seats |
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| June10 Paper1 | 1a | 6 | Input, output, storage devices for a store checkout |
| | 1b | 2 | Functions of system software and application packages |
| | 1c | 4 | What's a LAN; One HW to connect LAN to internet +reason |
| | 1d | 6 | Checksums/parity/binary addition for error detection |
| | 2 | 8 | Four purposes of operating systems |
| | 3a | 2 | Two differences between RAM and ROM |
| | 3b | 4 | Why is control software in ROM; why some RAM? |
| | 4a | 8 | Sys. analysis why requirements/ methods of fact finding |
| | 4b | 6 | Items in Requirements spec; items in Design spec |
| | 5a | 6 | Change decimal into binary, octal; relationship between |
| | 5b | 6 | Twos complement; negative number and subtraction |
| | 6a | 5 | Protocols; setting up a communications link |
| | 6b | 6 | Logical parts of a protocol; Physical parts of a protocol |
| | 6c | 6 | Steps used to protect data held on a computer system |
| | 7 | 8 | Menu ; Natural language interface: App, HW, Suitability |
| | 8 | 5 | OMR; How it works and why it is suitable |
| | 9a | 6 | Two types of secondary storage devices and how used |
| | 9b | 6 | Advs and Disadvantages of working from home for: programmer, software house and society |
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| Jun10 paper 2 | 1a | 4 | Benefits of using a drop-down box on a user interface |
| | 1b | 4 | Pseudo code for updating football match result - win/lose |
| | 1c | 2, 12 | Black box testing – Test plan completion football match |
| | 1d | 6 | Report design – League table |
| | 2a | 7 | Modules (what and advantages) and stepwise refinement |
| | 2b | 7 | Complete hierarchy (top-down) diagram of given scenario |
| | 2cde | 3,1,2 | What is a function?, data type?, dry running |
| | 2f | 5 | Rewrite a for loop with a while loop |
| | 3a | 3,3 | What is an array? 3 items to specify in defining an array |
| | 3b | 4 | Complete an algorithm to fill an array |
| | 3c | 8 | Write pseudo code to print out tickets |
| | 3d | 8 | Discuss rules for declaring variable, constants, arrays for error-free and easy understanding |
| | 4a | 4 | Purpose of given function: ASCII(letter); why subtract 64? |
| | 4b | 3 | Explain a recursive function |
| | 4c | 3 | Dry run; give result with reason. |
| Jun10 paper 3 | 4d | 5 | Trace running of a function: show every call and result |
| | 4e | 2 | Function written using iteration instead of recursion |
| | 4f | 4 | One adv/disadv of using iteration instead of recursion |
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| | 1a | 2,1,3,3 | OS: 2 reasons why is memory management necessary? Virtual memory? How is virtual memory used? What is disk threshing? |
| | 1b | 2 | What is scheduling? describe one method of scheduling |
| | 2a | 2 | Explain main purpose of a translator |
| | 2b | 2,1,1 | Intermediate code (IC) – adv over executable code; what other software needed with IC? disadv of IC |
| | 2c | 2 | What is code optimisation (when compiler is used)? |
| | 3a | 2 | Two features of Von-Neuman architecture (not fetch decode Execute) |
| | 3b | 3 | Names of 3 registers (not PC) |
| | 3c | 4,2 | Describe fetch-decode-execute cycle. How is jump done |
| | 3d | 3 | What is a co-processor? |
| | 4a | 3 | Convert a floating point binary number to denary |
| | 4b | 2 | Largest positive number possible (6 bit mantissa, 2 expo) |
| | 4c | 1,2,3 | Normalisation of binary numbers |
| | 5a | 1,1 | Static/dynamic data structures |
| | 5b | 2, 6 | Merge strings; write algorithm to merge streams of data |
| | 6a | 5 | Types of programming language- match to scenarios |
| | 6b | 8 | Declarative language; fact, rule, goal, instantiation, backtracking |
| | 7a | 2 | Use of functions and procedures |
| | 7b | 8 | Discuss Local, global variables and parameters |
| | 7c | 2 | Data structure used in program execution – which & why |
| | 8 a,b,c | 1, 2, 3 | BNF |
| | 9a, b, c | 2,2,3 | Assembly lang: mnemonics; Relative; Indexed addressing |
| | 9d, e | 2,2 | Two other addressing modes; Flow control |
| | 10a, b | 1,2 | Primary Key; Secondary key |
| | 10c | 11213 | ERD; cardinality; why separate tables? twice, Redraw ERD |
| | 10d | 3 | SQL – purpose of given sql |
| | 11a | 2 | Why is the unified modelling language (UML) used? |
| | 11b | 3 | Identify shapes in UML |
| | 11c,d | 1,3 | Feature of OOP in UML; eg of object, class, message |

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| Jun11 paper 1 | 1a, b | 2, 4 | What is an input device/ output device; Automatic ip/op |
| | 2a | 4 | Describe serial and parallel methods of data transmission |
| | 2b | 2 | Computer application that may use parallel transmission |
| | 3a | 4 | Peripherals needed at an information point + justification |
| | 3b | 3 | Method of connectivity (network) with justification |
| | 3c | 6 | Explain why a menu interface used; Forms interface used |
| | 4a | 2,2 | Character set of computer + use of code for character set |
| | 4b | 2,2 | Validation & verification: 1 verification; Existence Presence |
| | 4c | 8 | Discuss need to backup and archive data + methods used |
| | 5a | 2 | Concerns of personal data being held on computers |
| | 5b | 5 | Steps used to allay customer concerns on personal data |
| | 6a | 6 | Describe 3 stages of the systems life cycle |
| | 6b | 3 | Describe the waterfall model |
| | 6c | 4 | Importance of evaluation + the criteria used in evaluation |
| | 6d | 4 | Describe 2 maintenance types carried out on finished sys |
| | 7a | 6 | Describe contents of registers: MDR, CIR, Accumulator |
| | 7b | 4 | Describe different kinds of bus in the processor |
| | 8a | 2 | What is a protocol? |
| | 8b | 6 | Describe three parts of a protocol that will enable comms |
| | 8c | 5 | Describe packet switching to carry data on a network |
| | 9a | 8 | OS types and uses: multi-tasking; multi-user |
| | 9b | 1, 3 | Utility software and file handling utilities within computer |
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| Jun11 paper2 | 1a | 8 | User Interface Design |
| | 1b, 1c | 2, 3 | Write pseudo code using an IF statement |
| | 1d | 3 | Variables and If statements |
| | 1e | 2 | Nested IF statement. What is nesting? |
| | 1f | 8 | Beta version; what is it and what are the advs and disadvs |
| | 2a | 4 | (RAD) what is it? how does it help in developing an app? |
| | 2b | 4,1 | Define a procedure & how its used; Name one in the code |
| | 2c | 2, 1 | Difference between function & procedure; Name a function |
| | 2d | 3 | Explain a parameter using example from code |
| | 2e | 2, 1 | Keyword violation? Syntax error? |
| | 2f | 2, 1 | Error, implication for customer and type of error |
| | 2g | 8 | Write an algorithm in pseudo code to meet requirements |
| | 3a | 2, 3 | Indexed sequential file – what is it and reason for use |
| | 3b | 2 | Data types: why is a phone number not stored as an int? |
| | 3c | 6 | Data types and field sizes |
| | 3d | 4 | Estimate file size for 1000 records |
| | 3e | 2, 2 | Resetting a file; Complete Pseudo code |
| | 3f | 5 | Flowchart to be completed to meet given specification |
| | 4a | 4 | What is iteration and how is it used in given code? |
| | 4b | 6 | Complete a trace table |
| | 4c | 2,7 | What is recursive algorithm; Write recursive code in lang |
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| Jun11 Paper 3 | 1a | 2 | OS: what is the boot file? When is it used? |
| | 1b | 4 | Explain virtual memory |
| | 1c | 6 | Explain the purpose and use of file allocation table (FAT) |
| | 2a | 1, 4 | used to convert sourcecode to object? What's sourcecode |

